



# NASA Aeronautics

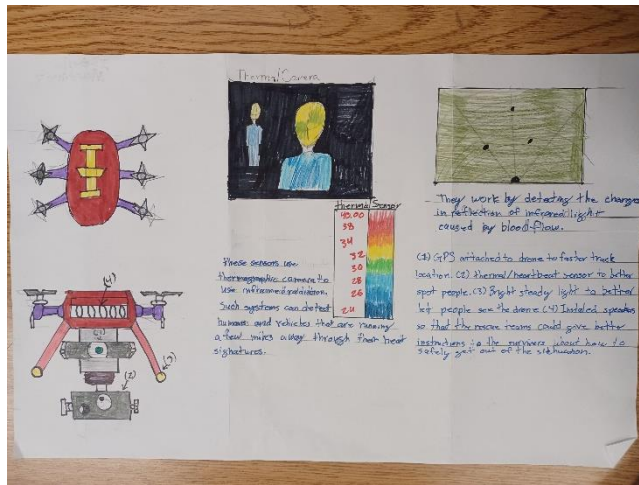
## Monthly STEM Newsletter

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*A rescue drone concept project winner for the 2022 “Dream with Us” design challenge. Middle and high school students were asked to envision the future of aeronautics.*

## September 2022

Welcome to the 2022-2023 year! Here at NASA Aeronautics we want you all to know how much we appreciate what you do, and that we’re here to support you in your classrooms, afterschool programs, colleges and universities, and organizations. To kick off the year, we’ve stocked our web pages with new lessons, activities, videos, and our newest STEM Toolkit, with more to come. Funding opportunities, a design challenge, and lots more can be found in this newsletter. We also celebrate the NASA Aeronautics teams at our aeronautics centers who supported the development of our Artemis missions.

Do you need to see more of something or have a new idea for upcoming newsletters? Let us know! Do you know someone else who needs this monthly update? [Sign up for our monthly STEM newsletter](#). Have questions or want to be removed from the list? Send an email to [April.a.lanotte@nasa.gov](mailto:April.a.lanotte@nasa.gov).

Let’s Fly!

## Newly Released STEM Items:

### New! [QueSST Supersonic STEM Toolkit](#)

The second of three NASA Aeronautics STEM Toolkits, The Quesst Supersonic STEM Toolkit pulls together K-12 STEM resources related to our X-59 supersonic aircraft in development along with materials that cover the science of sound. Like the [Sustainable Aviation STEM Toolkit](#), the new toolkit contains a compilation of NASA STEM materials related to sustainability and flight. Hands-on activities for K-12 students, videos, games and puzzles, as well as education guides to provide a better understanding of what our quest for quieter supersonic transport means here at NASA Aeronautics. The toolkit includes:

- 3D printing files
- Leveled Readers highlighting NASA subject matter experts focusing on sound and flight safety
- Activities in English and Spanish
- Desktop X-59 model

### New! [“Celebrating the Faces of Flight” Poster Series](#)

For many students, seeing someone who looks like them allows them to connect more with STEM opportunities. This downloadable, printable poster series allows you to share some of the many different faces here in NASA Aeronautics.



## Engage with Aero!

For many, school is back in session, and NASA is busy supporting conferences, airshows, and more. Here are two of the larger events we'll be a part of:

### Sept. 17-18, 2022: [Joint Andrews Air & Space Expo](#)

With free general admission, the Joint Base Andrews Air & Space Expo is the base's way to say "thank you" to the community, the state, and the National Capitol Region.

### Sept. 16-18, 2022: [Naval Air Station Oceana Airshow](#)

The Navy's largest open house in North America, the NAS Oceana Air Show is a way to give back to the community. We look forward to welcoming visitors from across the country and around the world to come onboard the Navy's East Coast Master Jet Base, see high-performance aircraft, and meet the exceptional men and women of naval aviation.

### Oct. 6-8, 2022: [AISES National Conference](#)

### Oct. 15-16, 2022: [Aerospace Valley Open House, Air Show, and STEM Expo 2022](#)

For the first time since 2009, the Edwards AFB air show is back, and larger than ever. Coinciding with the 75<sup>th</sup> anniversary of supersonic flight, the STEM Expo, USAF Thunderbirds flight demonstration, airshow, and open house will be free to the public. Join NASA, the Air Force, and others at Edwards Air Force Base in CA if you can!

*\*Please note that the events are currently scheduled as in-person events but could change due to COVID restrictions.*

**NASA TechRise Design Challenge:** Students in grades 6-12 are invited to design experiments that could be selected to fly on a NASA high-altitude balloon flight. Selected teams receive technical support during the experiment build phase: no experience necessary! Entries are due Oct. 24, 2022.



**NASA's Gateways to Blue Skies: Clean Aviation Energy Competition:**



In the push toward net-zero emissions by 2050, NASA seeks to crowdsource ideas for potential new clean aviation energy sources. Through the [2023 Blue Skies Competition](#), teams of two to six students will conceptualize and analyze the climate impacts along the source-to-flight lifecycle of one potential, primary clean aviation energy source of the future, and create a five- to seven-page research proposal and two-minute video summary. Finalist teams will receive a \$6,000 stipend to participate in the 2023 Blue Skies Forum at a NASA center in June 2023. Winners are eligible for NASA internships in the academic year following the competition. **Notice of Intent Deadline: Oct. 17, 2022. Submission Deadline: Feb. 28, 2023.**

**Did you know??**

NASA Aeronautics teams at multiple NASA Centers helped contribute their expertise to the development and testing of the Artemis missions. Read more about their contributions:

[Langley Research Center](#)

[Ames Research Center](#)

September 1, 1923: The Royal Australian Air Force is formed.

September 2, 1910: Blanche Scott, most likely the first female to fly in America, took to the air in Hammondsport, NY. She was also the first woman to drive an automobile across the United States.

September 13, 1935: Amateur aviator Howard Hughes breaks the world land plane speed record in his homebuilt Hughes Racer airplane.



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## Funding and Internship Opportunities:

The [NASA Teams Engaging Affiliated Museums and Informal Institutions TEAM II Community Anchor Awards Notice of Funding Opportunity](#) is now open. **Full proposals are due Oct. 18, 2022**, with individual awards ranging from \$35K-40K.

[Spring 2022 Internship applications](#) are now open (yes, really)! The deadline for Spring internships are Nov. 11, which will be here before we know it, with the spring session beginning Jan. 17<sup>th</sup>, 2023. *Please note that NASA Internships has recently migrated to a new application system. Previous applicants need to renew their passwords and update profiles before applying for an opportunity.*



## Professional Development:

### [Educator Professional Development](#)

[Collaborative \(EPDC\)](#): We know you're back in the classroom, but that doesn't mean you can't learn, too! Join NASA's EPDC team for free, virtual professional development to give you some great ideas for new lessons and activities tied to aeronautics. September virtual professional development includes: [Aeronaut-X: Shape your flight, geometry and aeronautics](#) on Sept. 6<sup>th</sup> at 7pm EST and [Aeronaut-X: 3, 2, 1...Lunch!](#) on Sept. 20<sup>th</sup> at 7pm, among others. Sessions are free, but registration is required.

### Links to our Aeronautics STEM Resources:

[Aeronautics Research Resources](#): (all ages) This link takes you to a wide variety of educator resources, Aeronautics@Home, ebooks, National Academies Reports, webinars, lithographs and mini posters, the NASA Aeronautics Research Institute, and more.

[Aeronautics@Home](#): (K-12) This web page contains aeronautics-based activities, videos, games, and more that can be completed at home, in the classroom, or in any number of settings. Topic areas include: "Build It!" "Explore It!" "Watch It!" "Solve It!" "Color It!" and "Aero Educator Resources". Coming soon: "Read It!" and "Do It!"

[Aeronautics Innovations Challenges](#): Keeping up with our many design challenges and opportunities for both post-secondary and K-12 can be tough. In response, we created a "one-stop shop" to pull them all together in one location.

[Flight Log Experience](#): (K-12, post-secondary, general public) Sign up to send your name with NASA Aeronautics on X-planes, UAS flights, and more as you build your virtual NASA flight log. Earn virtual endorsement stamps and mission patches and access aeronautics STEM activities and resources. Educators can sign up their entire class.

[NASA Express Sign-Up](#): (K-12, post-secondary) Have you signed up for NASA's NASA EXPRESS weekly newsletter? This newsletter contains the latest information for educators (K-12 and post-secondary) about new resources, design challenges, internships, and workshops. It is THE go-to for the latest STEM news.

[NASA Educator Professional Development Collaborative](#): (K-12 educators) Where do you go for ongoing, free NASA educator professional development opportunities? To EPDC! Take a look at webinars, digital badging and CEU opportunities, STEM teaching tips, videos, and so much more.

[Aeronaut-X](#): (K-12) Our Next Gen STEM: Aeronaut-X team provides new and exciting STEM activities that focus on cutting-edge aeronautics education and the future of flight.

[Museum and Informal Education Alliance](#): (Informal Educators and Museums) Not in a classroom? Looking for informal education materials? Join NASA's Museum and Informal Education Alliance, where you have access to NASA resources—including aeronautics—for your program, organization, museum, science center, or library. Find out about events happening near you and in the virtual world, and let the MIE Alliance help you build your programs! Access to guest speakers, the latest announcements about grant programs, and an active community network allow you to connect with other like-minded people in a supportive, engaging, and aerospace-focused neighborhood.

[NASA Aeronautics for Educators Facebook Page](#): (K-12, post-secondary) Join our NASA Aeronautics for Educators Facebook page, where the latest aeronautics updates, professional development opportunities, lessons and ideas are freely shared.

[NASA STEM Stars](#): (students ages 13+) Webchats that connect students ages 13+ with NASA experts of all types. Each chat introduces a STEM career, addresses a STEM topic, and highlights a NASA mission. Webchats are streamed live at 2pm EST via YouTube, and students can ask questions via the chat feature in real time. Or you can choose from a growing library of archived sessions.